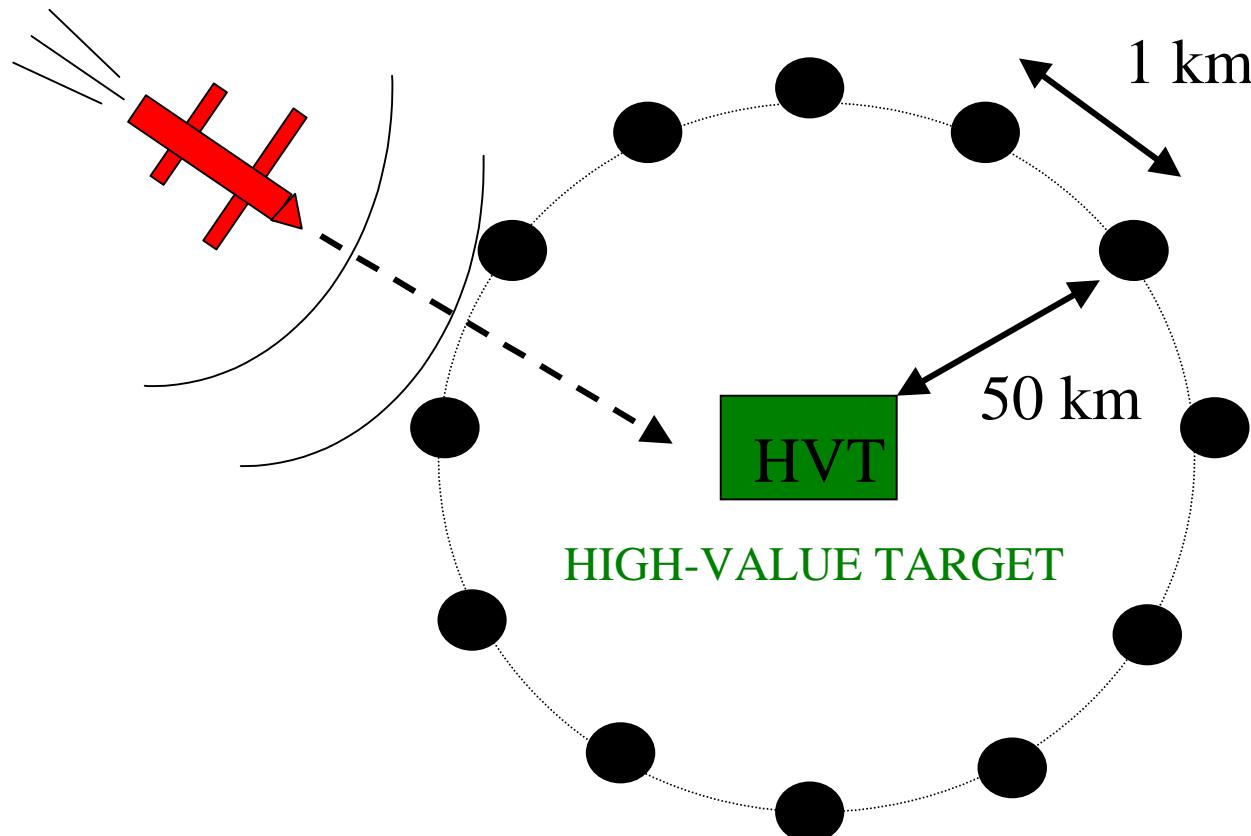




The University of  
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# ACOUSTIC CRUISE MISSILE DETECTION: SYSTEM CONCEPT



“ACOUSTIC FENCE”  
“ACOUSTIC SENTRY”  
“ACOUSTIC PICKET”

<b>Report Documentation Page</b>			Form Approved OMB No. 0704-0188	
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# TECHNICAL ISSUES

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**FY99:**

- **SIGNAL TO NOISE RATIO  
MUST BE SOLID**

**FY00:**

- **AUTOMATED UNALERTED  
DETECTION MUST BE RELIABLE**



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# ON-GOING ACOUSTIC ANALYSIS

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- RAW RECEIVED SIGNAL LEVEL (RL)  

- TRANSMISSION LOSS (TL)
- SOURCE LEVEL (SL)  
$$RL = SL - TL \quad SL = RL + TL$$
- RAW NOISE LEVEL  

- SIGNAL TO NOISE RATIO (SNR)



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# DAY/NIGHT PROPAGATION

